



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Yoshiko KASUGA et al

Serial No.: 10/608,435

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For: OPTICAL GLASS, PRESS-MOLDING PREFORM AND OPTICAL  
ELEMENT

DECLARATION

Honorable Commissioner of Patent and Trademarks  
Washington, D.C. 20231

I, Yoshiko KASUGA of 3-17-11-103, Kajino-  
cho, Koganei-shi, Tokyo 184-0002 JAPAN declare that:

1. I graduated from Sophia University, Department  
of Science and Engineering, Faculty of Chemistry in March  
2001. In April of the same year, I joined HOYA  
CORPORATION, the assignee of the present application, where  
I have engaged in research and development of optical  
glasses.

2. I am the first named inventor of the present  
application and am familiar with the subject matter of the  
present application.

3. I have carried out the following experiments to  
confirm that optical glasses disclosed in the three prior  
art references cited in the outstanding Office Action are  
different from the optical glass of the present invention.

Experimental method and results

(1) The optical glass specified in claim 10 of the  
present application has essential requirements that its  
refractive index (nd) is 1.57 to 1.67, that its Abbe's

number (vd) is 55 to 65, that its glass transition temperature (T<sub>g</sub>) is 550°C or lower and its haze value in terms of climate resistance is 3 % or less, and the glass composition thereof is specified in claim 13.

(2) Among glasses of Example 1 to 15 of Onozawa et al WO2000-21895A1 ("Onozawa reference" hereinafter), I selected a glass of Example 6 which had a refractive index of 1.667, an Abbe's number of 58.3 and a glass transition temperature of 519°C and appeared to have a glass composition relatively formally near (this does not mean "technically near") to the counterpart specified in claim 13 of the present application. This glass was prepared by weighing and mixing glass raw materials as described in Onozawa reference so as to obtain a composition shown in Example No. 6 of Table 1 on page 13 thereof, then heating, melting and homogenizing the mixture, decreasing the temperature thereof and casting it to a mold.

The resultant duplicate glass sample of Example 6 of Onozawa reference was measured for a haze value by the method described in section [0050] of the specification to the present application, to show 4.10 % as shown in Table-1 to be described later.

(3) Similarly, among glasses of Examples 1 to 12 of Nishimoto et al JP2003-176151A ("Nishimoto reference" hereinafter), there are glasses of Examples 2, 3, 7 and 8 that appear to have glass compositions relatively formally near to the glass composition recited in claim 13 of the present application. The glass of Example 2 and the glass of Example 8 appear to have almost the same properties, and the glass of Example 3 and the glass of Example 7 appear to have almost the same properties. Therefore, glasses of Examples 7 and 8 were prepared according to the method described in section [0044] of Nishimoto reference.

The resultant duplicate glass samples of Examples 7 and 8 of Nishimoto reference were measured for a haze value by the method described in section [0050] of the specification to the present application, to show 8.93 % and 36.83 % as shown in Table-1 to be described later.

(4) Similarly, among glasses of Examples 1 to 11 and Comparative Examples 21 to 23 of Hirota et al US 5,919,718 ("Hirota reference" hereinafter), I selected glasses of Examples 8 and 11 that had refractive indices of 1.5907 and 1.5981 and Abbe's numbers of 61.4 and 61.3 and that appeared to have glass compositions relatively formally near to the glass composition recited in claim 13 of the present application, and these glasses were prepared according to the method described in Hirota reference.

The resultant duplicate glass samples of Examples 8 and 11 of Nishimoto reference were measured for a haze value by the method described in section [0050] of the specification to the present application, to show 15.08 % and 28.78 % as shown in Table-1.

Table-1

| Duplicate glass                               | Haze value (%) |
|---|----------------|
| Onozawa reference<br>Example 6                | 4.10           |
| Nishimoto reference<br>Example 7<br>Example 8 | 8.93<br>36.83  |
| Hirota reference<br>Example 8<br>Example 11   | 15.08<br>28.78 |

#### Conclusion

As is clear in Table-1, all of the duplicate

glasses according to Onozawa reference, Nishimoto reference and Hirota reference have haze values of over 3.0 % and are poor in climate resistance, and they differ from the climate-resistance glass having a haze value of 3.0 % or less as specified in claim 10 of the present application.

The undersigned declarant declares that all statements made herein of her own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonments, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Dated this 29<sup>th</sup> day of August 2005

Yoshiko Kasuga

Yoshiko KASUGA